

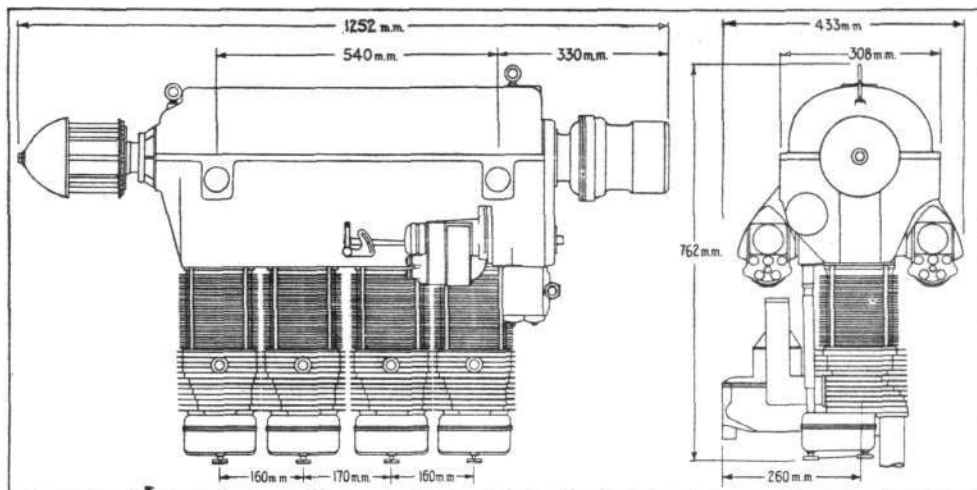
end, which makes contact with the valves. Rocker covers by J. Stone and Co. enclose the "underhead" valve gear and ensure that no loose oil escapes.

A Claudel Hobson AV.48D carburetter is fitted, and distributes mixture to the four cylinders via a square-section induction pipe. It is provided with an independent altitude control.

Ignition is provided by two B.T.H. spigot-type magnetos, each firing four K.L.G. type V.12/1 sparking plugs. One of the magnetos is provided with an impulse starter. The usual Simms vernier rubber couplings are fitted. Weston oil seals for the magneto drives are provided.

The oil pump, by Magnesium Castings and Products, is of the oscillating piston type, and has been specially designed for the "Cirrus Major" engine. It is considered that this type possesses advantages over the gear type of pump, particularly where the oil tank is situated some distance below the engine, as it is capable of working with a greater lift. The suction and pressure pumps and filters are all housed in one casting at the rear of the crank case, direct connection being made to the oil ducts in the casting without the aid of external pipes. The removal of the filters for cleaning purposes is thus a very simple matter.

Resilient-type bearer feet are supplied, and it might be pointed out that the width between centres can be adjusted by using different types of feet. Distances are, of course, taken from the bolts of the stirrups which house



Installation diagram of the "Cirrus Major"; the width between bearer centres is adjustable.

the "Silentblocs," and into which the metal bearer feet are fitted.

All "Cirrus Major" engines are supplied complete with induction manifold, carburetter, two magnetos, eight sparking plugs, propeller boss and spinner, resilient bearer feet, "Silentblocs" and stirrups for them, cylinder cooling chutes and baffles, oil pumps and filters, engine controls, and tool kit for running adjustments. All engines are "motored-in" before being tested under their own power. This is done by electric power, and during the motoring period the engines are copiously supplied with oil, which is passed through special filters.

The new "Cirrus Major," and its "brothers," the "Minor" and the "Hermes IV A," start with a very definite advantage in that they are being manufactured

### THE "CIRRUS MAJOR" ENGINE

- TYPE: Four-cylinder, in-line inverted air-cooled.
- DIRECTION OF ROTATION: Left-hand Tractor.
- BORE: 120 mm (4.72in.).
- STROKE: 140 mm (5.51in.).
- SWEPT VOLUME: 6.33 litres (386.28 cu. in.).
- COMPRESSION RATIO: 5.1:1.
- NORMAL B.H.P.: 125 at 2,100 r.p.m.
- MAXIMUM B.H.P.: 135 at 2,350 r.p.m.
- CRUISING REVS.: 2,100 r.p.m.
- \*WEIGHT COMPLETE: 310 lb. (140.6 kg).
- FUEL CONSUMPTION: 0.54 pt./b.h.p./hr. at normal r.p.m.
- " " : 0.58 pt./b.h.p./hr. at max. r.p.m.
- OIL CONSUMPTION: 1 pint per hour.
- OIL PRESSURE: 40-60 lb./sq. in. (15 lb./sq. in. minimum).
- OIL IN CIRCULATION: 0.75 gal. minimum.
- HEAD OF PETROL REQUIRED: 2-12ft. (or 1 lb./sq. in. min., 5 lb./sq. in. max.).
- LENGTH (incl. starter and spinner): 1252 mm (49.22in.).
- HEIGHT AT FRONT: 720 mm (28.35in.).
- HEIGHT AT REAR: 762 mm (29.95in.).
- GREATEST WIDTH: 459 mm (18.1in.).
- BEARER FEET CENTRES LENGTH: 540 mm (21.26in.). (Width between bearer feet centres adjustable.)

\* The weight complete includes magnetos, carburetter, airscrew boss and spinner, resilient bearer feet, Silentblocs and stirrups, engine controls, side cooling chute and baffles, oil pumps and filters, and is subject to a variation of  $\pm 5$  lb.

(Right) With crank case cover removed. The "Cirrus Major" on a test bed, tilted in order the better to show the details. Note the grouping of the drives at the back.

